If you are using a printed copy of this procedure, and not the on-screen version, then you MUST make sure the dates at the bottom of the printed copy and the on-screen version match.
The on-screen version of the Collider-Accelerator Department Procedure is the Official Version.
Hard copies of all signed, official, C-A Operating Procedures are kept on file in the C-A ESHQ Training Office, Bldg. 911A.

C-A OPERATIONS PROCEDURES MANUAL

9.3.3 Procedure for Obtaining Approval to Place Devices into the RHIC Warm-Beam Tube Regions

Text Pages 2 through 4

Hand Processed Changes

HPC No.	Date	Page Nos.	Initials

Approved: _____***Signature on File***_____ _____
Collider-Accelerator Department Chairman Date

G. McIntyre

9.3.3 Procedure for Obtaining Approval to Place Devices into the RHIC Warm-Beam Tube Regions

1. Purpose

To define the process for allocating space in the warm beam tube regions of RHIC.

2. Responsibilities

2.1 The project cognizant engineer or physicist is responsible for initiating this procedure. This includes ensuring that equipment or systems fitting the profile for ESH reviews, as stated in C-A-OPM 9.3.1, "Procedure for Reviewing Conventional Safety Aspects of a C-A System", are referred to the C-A Accelerator Systems Safety Review Committee's (ASSRC) for review.

2.1.1 Ensuring that equipment or systems, that could effect the radiation environment of the area, are reviewed by the C-A Radiation Safety Committee (RSC), as per C-A-OPM 9.1.1, "Obtaining Review by C-A Radiation Safety Committee".

2.2 The Accelerator Physics Collider Group Leader, or designee, is responsible to approve the device, upon verifying the device will not have a negative impact on beam. See Process Specific EMS Training, Beam Stops & Collimators (Beam Loss and Minimizing Disposal Cost), for guidance on beam loss controls.

3. Prerequisites

3.1 Verify the RHIC lattice maps are accurate, representing what is presently in the warm beam tube regions prior to proposing the installation of a new piece of equipment.

4. Precautions

None

5. Procedure

5.1 The project engineer or physicist shall fill out an Engineering Change Notice (ECN), detailing the device, its purpose, and the approximate tunnel location. The ECN shall note changes to the relevant "ALLOTMENT, SPACE" drawing. ECN forms are available from the C-A Documentation Control Center (x4756).

5.2 The project engineer or physicist will arrange a meeting with the C-A Vacuum Systems Group Leader (GL), or designee, to discuss the proposed location of the new device. The project engineer or physicist, and Vacuum System GL, upon review of the Vacuum Systems warm beam tube regions database, will agree on the exact device location. The location will be defined by the distance from the nearest experimental interaction point (IP) to:

- the device's beam tube flange face nearest the IP, and
- the device's beam tube flange face furthest from the IP.

These location data shall be entered in the Vacuum System' s Warm-Beam Tube Regions database and listed on the ECN.

The Vacuum GL, or designee, shall approve the ECN.

5.3 The ECN shall then be submitted to the Accelerator Physics-Collider (AP-C) Group Leader, or designee, for approval.

5.4 The ECN shall then be submitted to the Operations Analysis (OA) Group Leader, or designee. OA shall verify the locations do not interfere with any resident or previously proposed devices. OA shall enter the device's location into the RHIC machine lattice.

OA shall then approve the ECN and submit it to the Chief Mechanical Engineer, or designee, for approval.

5.4.1 The OA, or designee, shall develop survey data for the device. This data will be given to the C-A Survey GL for use when the device is installed in the RHIC tunnel.

5.5 The Chief ME, or designee, shall forwarded the approved ECN to the project engineer or physicist, for submittal to the C-A Design Room. The project engineer or physicist are to submit the ECN, a design room work request to implement the ECN, and an electronic drawing file with plan, elevation and end views of the device to be installed, to the design Room Group Leader. The drawing file shall be in a design room-compatible software.

5.6 The C-A Design Room staff shall:

- incorporate the noted location changes or additions onto the warm area drawings noted on the ECN.

- import the reference file of the device into the ECN-noted "ALLOTMENT, SPACE" drawing(s) at its ECN-designated location.

- Ensure the modified C-A drawing(s) and the ECN are stored by the C-A Documentation Control Center staff.

5.7 If an ASSRC review was required, the project engineer or physicist shall verify the sign-off of all items that must be closed out before start of operations, or sub-systems operation, on the ASSRC Check-Off List.

5.8 If an RSC review was required, the project engineer or physicist shall verify the sign-off of all items that must be closed out before start of operations, or sub-system operation, on the RSC Check-Off List.

6. Documentation

6.1 Completed Engineering Change Notice (ECN)

7. References

7.1 CAD-QAP-603 Configuration Management.

7.2 C-A-OPM 9.3.1, "Procedure for Reviewing Conventional Safety Aspects of a C-A System".

7.3 C-A-OPM 9.1.1, "Obtaining Review by C-A Radiation Safety Committee".

8. Attachments

None